REMARKS/ARGUMENTS

Applicant acknowledges receipt of the Examiner's communication dated July 11, 2006.

I. Amendments

Claims 1 to 21 are pending. Claim 1 has been amended to address the Examiner's objections as detailed below. Applicant submits that no new subject matter has been introduced and that the amendments to claim 1 are supported by the specification as filed, see, for example, pages 5 and 6, the second paragraph of the Summary Of The Invention.

In addition, applicant has canceled, without prejudice or disclaimer, claims 2 and 4. Claims 7–9 have been appropriately amended so that they no longer depend on claim 2, but now on claim 1. Claims 10, 12–17 and 19 have all been amended to add a colon (:) after the transitional phrases.

II. Information Disclosure Statement (IDS)

The Examiner has advised the applicant that in the IDS submitted on July 27, 2004, the Clay et al. non-patent document was submitted twice and that the Woo et sl. document was not present. Applicant thanks the Examiner for bringing this to its attention. In response, applicant includes with this response a supplemental IDS including the Woo et al. non-patent document.

III. Rejection Under 35 U.S.C. §102

The Examiner has rejected claims 1–4, and 7–14, under 35 U.S.C. §102(b) as anticipated by Shmulewitz et al. (U. S. Patent No. 6,095,987). Reconsideration thereof is requested in light of the following.

Applicant notes that Shmulewitz et al. is directed to continuously measuring cardiac output using bioelectrical impedance analysis. Although Shmulewitz et al. utilizes weights associated to *a priori* knowledge of the relative distribution of blood flow through, for example, the aorta, distribution does not reflect the underlying physiology, as in applicant's invention. In particular, and in contrast to Shmulewitz et al., applicant uses a baseline electrical property associated with each of the current injections, and which is used to compute the diagnostic. Shmulewitz et al. discloses an averaging of repeated bioelectrical impedance analysis.

In particular, Shmulewitz et al. does not disclose, as now claimed in amended claim 1, a method for diagnosing the possibility of disease in a body part, the method comprising representing the body part with a grid having a plurality of finite elements, using a model of the body part, obtaining a set of weights associated with a particular one of the plurality of finite elements, each finite element has one weight factor for each current injection obtained with an electrode array, and each weight factor obtained from the current density in the finite element, obtaining a baseline electrical property associated with each of the current injections, computing a diagnostic at the particular finite element, for each finite element the diagnostic is the sum over all current injections of the weight factor multiplied by the ratio of the baseline electrical property to a measured impedance, and utilizing the diagnostic to diagnose the possibility of disease in the body part, the higher the value of the sum of the diagnostic, the higher the possibility of disease at the location of the associated finite element.

IV. Rejection Under 35 U.S.C. §103(a)

The Examiner objected to claims 5–6, and 15–21 under 35 U.S.C. §103(a) as unpatentable over Shmulewitz et al. in view of Clay et al. (IDS Non-Patent Literature, Cite 1: IEEE Transactions on Medical Imaging, Vol. 21, No. 6, June 2002). Reconsideration is requested.

Clay et al. is concerned with impedance tomography to detect and localize brain impedance changes associated with stroke. The Examiner cites Clay et al. as showing or representing the grid as two or three dimensional. Applicant submits that there is nothing in Clay et al. that suggests a method for diagnosing the possibility of disease in a body part, the method comprising representing the body part with a grid having a plurality of finite elements, using a model of the body part, obtaining a set of weights associated with a particular one of the plurality of finite elements, each finite element has one weight factor for each current injection obtained with an electrode array, and each weight factor obtained from the current density in the finite element, obtaining a baseline electrical property associated with each of the current injections, computing a diagnostic at the particular finite element, for each finite element the diagnostic is the sum over all current injections of the weight factor multiplied by the ratio of the baseline electrical property to a measured impedance, and utilizing the diagnostic to diagnose the possibility of disease in the body part, the higher the value of the sum of the diagnostic, the higher the possibility of disease at the location of the associated finite element.

Moreover, applicant submits that one skilled in the art would not be motivated to combine the teachings of Shmulewitz et al., which is concerned with analysis of blood *flow*, with those of Clay et al., which is to detect and *localize* brain impedance changes to come up with the invention of the applicant as now claimed.

In light of the above arguments, the Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Should the Examiner have any further questions, comments, or concerns related to this case and for which the Examiner deems a telephone call may expedite prosecution, the Examiner is invited to contact the undersigned at (416) 957-1697.

Respectfully submitted,

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